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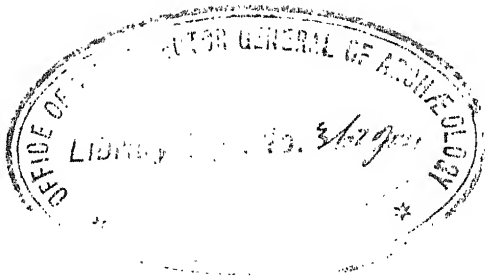
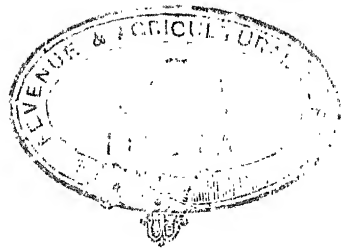
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THE INDIAN MUSEUM

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REVENUE AND AGRICULTURAL DEPARTMENT.

No. ....





# Indian Museum.

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## ANNUAL REPORT.

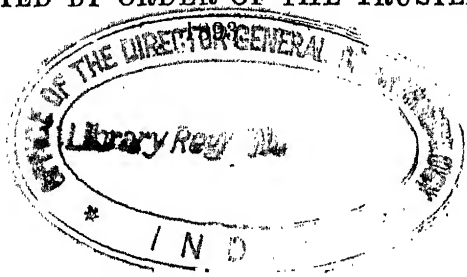
April 1892 to March 1893.

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CALCUTTA:  
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MINUTES  
OF  
THE ANNUAL MEETING  
OF  
THE TRUSTEES OF THE INDIAN MUSEUM.

---

MONDAY, 8TH MAY 1893.

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Present:

BRIGADE-SURGN. LT.-COL. G. KING, C.I.E., LL. D., *Chairman*.  
COLONEL A. W. BAIRD, R. E., F.R.S.  
DR. A. F. R. HERNLE.  
DR. MAHENDRA LAL SIRCAR, C.I.E.  
G. A. GRIERSON, Esq., I.C.S.  
COLONEL J. WATERHOUSE, B.S.C., *Honorary Secretary*.

IA. The following Officers were elected for the ensuing year:—

BRIGADE-SURGN. LT.-COL. G. KING, C.I.E., LL. D., *Chairman*.  
A. PEDLER, Esq., F.R.S., *Vice-Chairman*.  
DR. W. KING, *Honorary Secretary*.  
A. PEDLER, Esq., F.R.S., *Honorary Treasurer*.

## REPORT OF THE TRUSTEES OF THE INDIAN MUSEUM.

IIA. The Committees for the ensuing year were appointed as follows :—

### *Finance and Visiting Committee.*

C. LITTLE, ESQ.,  
COLONEL J. WATERHOUSE, B.S.C.  
COLONEL A. W. BAIRD, R.E., F.R.S.  
BABU OMRITA NATH MITTER.  
DR. A. R. F. HERNLE.  
DR. MAHENDRA LAL SIRCAR, C.I.E.  
O. T. BARROW, ESQ., I.C.S.  
G. A. GRIERSON, ESQ., I.C.S.

### *Economic Committee.*

BABU OMRITA NATH MITTER.  
C. LITTLE, ESQ.  
COLONEL J. WATERHOUSE, B.S.C.  
COLONEL A. W. BAIRD, R.E.,  
F.R.S.  
G. A. GRIERSON, ESQ., I.C.S.  
DR. MAHENDRA LAL SIRCAR,  
C.I.E.

IIIA. The Trustees' Administration Report and the Reports on the Zoological and Archæological Section by the Superintendent of the Museum, and on the Economic and Art Section by the Officer in charge, for the year 1892-93, were read and approved.

G. KING,  
*Chairman.*

# REPORT

## OF

### THE TRUSTEES OF THE INDIAN MUSEUM

FOR THE YEAR 1892-93.

The following report on the administration of the Indian Museum Trust, during the year ending 31st March 1893, is submitted for the information of His Excellency the Right Hon'ble the Governor General in Council.

#### MEMBERS.

At the commencement of the year the Board of Trustees consisted of the following Members :—

1. O. T. BARROW, Esq., I.C.S., *Accountant-General of Bengal.*

2. MAHARAJA SIR JOTINDRO MOHUN  
TAGORE, K.C.S.I.

3. J. ELLIOT, Esq.

4. COLONEL H. R. THUILLIER, R.E.,  
C.I.E.

5. HON'BLE H. H. RISLEY, I.C.S., C.I.E.

6. BRIGADE-SURGN. LT.-COL. G. KING,  
C.I.E., F.R.S., LL.D.

7. C. E. BUCKLAND, Esq., I.C.S.

8. M. FINUCANE, Esq., I.C.S.

9. J. D. MAXWELL, Esq.

10. PRINCE JAHAN KADER MIRZA MAHOM-  
MED WAHED ALI BAHADUR.

11. BABU OMBUTA NATH MITTER.

Nominated by the  
Governor General in  
Council.

Nominated by the  
Lieutenant-Governor  
of Bengal.



## REPORT OF THE TRUSTEES

- |                                                                                                                                                                                                                       |   |                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------|
| <p>12. SURGEON-LT.-COL. D. D. CUNNINGHAM,<br/>F.R.S., C.I.E.</p> <p>13. DR. A. F. R. HOERNLE.</p> <p>14. C. LITTLE, Esq.</p> <p>15. THE HON'BLE SIR ALFRED CROFT,<br/>K.C.I.E.</p> <p>16. A. PEDLER, Esq., F.R.S.</p> | } | <p>Nominated by the<br/>Asiatic Society of<br/>Bengal.</p> |
| <p>17. COLONEL J. WATERHOUSE, B.S.C.</p> <p>18. COLONEL A. W. BAIRD, R.E., F.R.S.</p> <p>19. SURGEON-MAJOR J. SCULLY.</p> <p>20. DR. W. KING.</p> <p>21. SIR JOHN EDGAR, K.C.I.E., C.S.I.</p>                         | } | <p>Elected by the Trustees.</p>                            |

### *Changes in the Board during the year 1892-93.*

On 10th March 1892, Mr. O. T. Barrow, I.C.S., the Accountant-General of Bengal, left for England on furlough, and Mr. R. E. Hamilton, his official *locum tenens*, became *ex-officio* a Trustee during his absence; on the 7th July 1892, Mr. C. E. Buckland, I.C.S., Secretary to the Government of Bengal, Revenue Department, proceeded to England on leave, and Mr. W. Maude, I.C.S., Officiating Secretary, acted as a Trustee during his absence; subsequently the Hon'ble H. H. Risley was appointed to this post; on 3rd May 1892, Mr. W. C. Macpherson, I.C.S., was appointed Director of Land Records and Agriculture, Bengal, *vice* Mr. M. Finucane, I.C.S., and took the latter's seat at the Trustees' Board; on 31st May 1892, His Honour the Lieutenant-Governor of Bengal reappointed Mr. A. Simson to the seat vacated by Mr. J. D. Maxwell on his departure for Europe; and the Council of the Asiatic Society of Bengal appointed the Hon'ble Dr. Mahendra Lal Sircar, C.I.E., to the seat vacated by the Hon'ble Sir A. W. Croft, K.C.I.E., on his departure for England on furlough; at the Annual Meeting of the Trustees on 9th

# OF THE INDIAN MUSEUM.

May 1892, Mr. G. A. Grierson, I. C. S. was appointed to the seat vacated by Sir John Ware Edgar, K.C.I.E., C.S.I., on his departure for Europe.

The result of these changes was that, on the 31st March 1893, the Board was composed as follows :—

- |                                                           |                                                 |
|-----------------------------------------------------------|-------------------------------------------------|
| 1. O. T. BARROW, Esq., I.C.S.                             | Accountant-General of Bengal.                   |
| 2. MAHARAJA SIE JOTINDRO MOHUN TAGORE, K.C.S.I.           | Nominated by the Governor-General in Council.   |
| 3. J. ELIOT, Esq.                                         |                                                 |
| 4. COLONEL H. R. THUILLIER, R.E., C.I.E.                  |                                                 |
| 5. Vacant.                                                |                                                 |
| 6. BRIGADE-SURGN. LT.-COL. G. KING, C.I.E., F.R.S., LL.D. |                                                 |
| 7. HON'BLE H. H. RISLEY, I.C.S., C.I.E.                   | Nominated by the Lieutenant-Governor of Bengal. |
| 8. W. C. MACPHERSON, Esq., I.C.S.                         |                                                 |
| 9. A. SIMSON, Esq.                                        |                                                 |
| 10. PRINCE JAHAN KADER MIRZA MAHOM-ED WAHED ALI BAHADUR.  |                                                 |
| 11. BABU OMBITA NATH MITTER.                              |                                                 |
| 12. SURGEON-LT.-COL. D.D. CUNNINGHAM, F.R.S., C.I.E.      | Nominated by the Asiatic Society of Bengal.     |
| 13. DR. A. F. R. HÖENLE.                                  |                                                 |
| 14. C. LITTLE, Esq.                                       |                                                 |
| 15. HON'BLE DR. MAHENDRA LAL SIRCAR, C.I.E.               |                                                 |
| 16. A. PEDLER, Esq. F.R.S.                                | Elected by the Trustees.                        |
| 17. COLONEL J. WATERHOUSE, B.S.C.                         |                                                 |
| 18. COLONEL A. W. BAIRD, R.E., F.R.S.                     |                                                 |
| 19. SURGEON-MAJOR J. SCULLY.                              |                                                 |
| 20. DR. W. KING.                                          |                                                 |
| 21. G. A. GRIERSON, Esq., I.C.S.                          |                                                 |

## REPORT OF THE TRUSTEES

Meetings have been held monthly throughout the year. The Annual General Meeting was held on 9th May 1892, at which the following Officers of the Trust and Members of the Finance and Visiting and Economic and Art Committees were appointed for 1892-93 :—

### HONORARY OFFICERS:

BRIGADE-SURGN.-LT.-COL. G. KING, C.I.E., F.R.S., LL.D., *Chairman*.  
A. PEDLER, Esq., F.R.S., *Vice-Chairman*.  
DR. W. KING, *Honorary Secretary*.  
A. PEDLER, Esq., F.R.S., *Honorary Treasurer*.

### COMMITTEES.

#### *Finance and Visiting Committee.*

DR. A. F. R. HERNLE.  
BABU OMRITA NATH MITTER.  
C. LITTLE, Esq.  
COLONEL A. W. BAIRD, R.E.,  
F.R.S.  
R. E. HAMILTON, Esq.  
HON'BLE DR. MAHENDRA LAL  
SIRCAR, C.I.E.  
COL. J. WATERHOUSE, B.S.C.

#### *Economic Committee.*

M. FINUCANE, Esq., I.C.S.  
BABU OMRITA NATH MITTER.  
C. LITTLE, Esq.  
COLONEL A. W. BAIRD, R.E.,  
F.R.S.  
G. A. GRIERSON, Esq., I.C.S.  
COLONEL J. WATERHOUSE, B.S.C.  
HON'BLE DR. MAHENDRA LAL  
SIRCAR, C.I.E.

The Honorary Officers are also *ex-officio* Members of all Committees.

The Finance Committee has held eleven meetings, at which the accounts have been examined and the expenditure controlled.

There were three meetings of the Visiting Committee and eleven of the Economic Committee, at which matters relating to the internal management of the various Sections were

## OF THE INDIAN MUSEUM.

discussed and orders formulated for subsequent confirmation by the General Committee of the Trustees.

In addition to the ordinary meetings of the General Committee one special meeting was held to consider a letter from the Secretary to the Government of India, in the Revenue and Agricultural Department, No. 1123-1 Mus. and Ex., dated 11th May 1892, which is fully dealt with below in paragraph 7 of the Administration Report.

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### GENERAL ADMINISTRATION.

A review of the progress of the Museum during the year 1892-93 could not be compiled without a reference to the lamentable circumstance that formed so sad a sequence to the closing events of that year; for although it did not actually take place within the twelve months to be reviewed, it has an essential bearing on many of the more important undertakings of that period. On 10th May 1893, the Trustees learnt by telegram that their Superintendent, Mr. J. Wood-Mason, who had started for Europe on the 6th of the previous month, had died on the voyage home. At the next general meeting of the Board the following brief memoir of Mr. Wood-Mason's scientific career was read :—

Towards the end of 1868 the Trustees obtained the sanction of the Government of India to the creation of a new appointment of "Assistant Curator of the Indian Museum;" and they invited Professor Huxley and Dr. Hooker to assist them in selecting a candidate to fill it. With the concurrence of Dr. Hooker, Professor Huxley nominated one of his own students, Mr. J. Wood-Mason. Mr. Wood-Mason was then in his 23rd year; he had been educated at Charterhouse, and Queen's College, Oxford, and was strongly recommended by Professors Westwood and Phillips.

## REPORT OF THE TRUSTEES

In due course the Trustees confirmed Professor Huxely's nomination, and on 12th October 1869, Mr. Wood-Mason arrived at Calcutta, and took up his appointment.

It had been stipulated that the Assistant Curator should devote himself, in the first instance, to the charge of the Invertebrata; and most of Mr. Wood-Mason's earlier work in the Museum was connected with the Insect Fauna of India. In this wide field he selected the Orthoptera and Lepidoptera as his special branches; and his observations in respect of them are recorded in a large number of scientific papers published in the Journal of the Asiatic Society of Bengal, the Proceedings of the Entomological and Zoological Societies of London, and the Annals and Magazine of Natural History. These papers have earned for him a world-wide reputation, both as a general Entomologist and as a Specialist in the families Phasmidæ and Mantodea. Two parts of his illustrated Catalogue of the latter have already been published. Some of his more recent papers on the Lepidoptera were compiled in collaboration with Mr. L. de Nicéville, a recognised authority on Indian butterflies.

When Mr. Wood-Mason joined the Museum, the Institution possessed a very meagre collection of Invertebrate specimens other than Mollusca and Insecta. In 1872 he was attached as Invertebrate-zoologist to a scientific expedition to the Andamans, whence he returned with an exceptionally fine series of specimens of Marine Invertebrata. For a number of years after this event he continued to write on the Hexapoda, but evidence is not wanting to show that he had already undertaken something more than an ordinary study of other classes of the Arthropoda. His "Morphological Notes bearing on the origin of Insects," published in 1879, incidentally manifest a very intimate acquaintance with the most minute details of the anatomy of the Crustacea and Tracheata. In the former class the Indian Fauna presented a field as yet almost unworked by zoologists, and one which offered ample scope for the exercise of those remarkable powers of accurate analysis and synthesis which stamp his individuality upon all Mr. Wood-Mason's scientific work. After his return from the Andamans he commenced to work at the Invertebrate Fauna of the Indian Seas in a more systematic manner; and from this date a portion of the grant for the Library was annually expended on literature devoted to Marine Invertebrate zoology, and more particularly to the Crustacea, while every opportunity was taken to increase and im-

## OF THE INDIAN MUSEUM.

prove the Museum collection of the last-named, which Mr. Wood-Mason had now adopted as the object of his favorite study, and which continued to be so during the rest of his career. His researches were more particularly concerned with the Macrurous and Brachyurous Decapoda.

In 1881 this study had to be put aside for the time being, as the Government required a Scientific Officer to investigate the Insect pests affecting the Tea plant in Assam. Mr. Wood-Mason was not anxious to undertake this deputation, for he had no taste for the practical or economic side of the question, and he, no doubt, correctly anticipated that nothing short of a panacea capable of remedying all the ills from which the tea plant suffers would satisfy the expectations of those connected with the tea interests, while he must have foreseen that an investigation that had to deal with the subject *ab initio* was not likely to prove either final or conclusive, and that any measures he might suggest must, from the circumstances of the case, be in the nature of experiments. However, he was induced to undertake the deputation, and his report of the results contains a very full and interesting description of the "Tea-mine and Tea-bug of Assam" with a synopsis of the opinions of the planters themselves on the various remedies that had been tried or suggested. Subsequently he investigated and reported upon the Rice pests of Bengal and Burma. At a later date he was deputed to visit the Silk Districts of Bengal, and on his return drew up a useful descriptive report on the diseases affecting the Bengal Mulberry Silkworms. He received the thanks of the Government for these investigations in Economic Entomology.

As already mentioned, Mr. Wood-Mason was keenly interested in Marine Zoology. He took an active part in the movement which resulted in the Government of India recognising the collection of Natural History specimens as a legitimate part of the duties of the Marine Survey. This scheme was enthusiastically adopted by the Officers of Her Majesty's Indian Marine Survey Steamer *Investigator*, and Mr. Wood-Mason found zealous co-adjutors in the two Officers who successively served as Surgeon Naturalists to the Survey, *viz.*, Drs. G. M. Giles and A. W. Alcock. Since 1885 the Museum has received a regular inflow of valuable acquisitions from this source; and, at the present time, its collection of Marine specimens, especially of the deep-sea forms, is almost without rival. This highly satisfactory result is partly owing to the

## REPORT OF THE TRUSTEES

advantageous exchanges of duplicate *Investigator* specimens which have been effected on behalf of the Museum with similar institutions in Europe. In the spring of 1888 Mr. Wood-Mason was himself deputed as Naturalist on board the *Investigator* for a short period.

Since 1887 Mr. Wood-Mason has published a number of scientific papers dealing with various branches of Marine Zoology. His contributions to the "Natural History Notes of Her Majesty's Indian Marine Survey Steamer *Investigator*" contain the descriptions of several new species of Brachyura of which the Museum possesses the types; in conjunction with Dr. A. W. Alcock he has revised the general results of the deep-sea dredging, and has published two valuable papers on the gestation of Indian Rays, the latter in the *Proceedings of the Royal Society*. In the "Illustrations of the Zoology of Her Majesty's Indian Marine Survey Steamer *Investigator*" he has published some beautiful plates of Crustaceans, mostly new species, of which the descriptions have appeared in the *Annals and Magazine of Natural History*.

During his study of the Hexapoda Mr. Wood-Mason made himself specially familiar with the various forms of stridulating organs possessed by different groups of Insects. He subsequently discovered analogous organs in the Tracheatan genera *Mygale*, *Scorpio* and, more recently, *Sphæropoeus*. As an instance (if instances are required) of the extent of Mr. Wood-Mason's reputation in the scientific world, it may be mentioned that Packard in his "Guide to the Study of Insects," published at Boston, U. S. A., in 1880, states that *Mygale* and *Scorpio* stridulate; while in a preface in which the more recent important entomological discoveries are briefly reviewed, Mr. Wood-Mason forms one of a company of recognised modern authorities on Entomology, of which Sir J. Lubbock, Messrs. Moseley, Scudder, and Swinton, and Drs. le Conte and Horn are others.

With his intimate knowledge of the characteristic forms of these sound-producing organs, Mr. Wood-Mason could not fail to observe them upon a close inspection of any animal that possessed them. During an examination of some specimens of Crustacea sent to the Museum, he at once correctly diagnosed the stridulating functions of certain organs which he observed in a species of Ocypoda and in two species of Squilla, although he only had dead specimens to examine. His estimate of the homologous value of these organs was subsequently confirmed, in the

## OF THE INDIAN MUSEUM.

case of the Ocypoda species, in the completest manner by the Surgeon Naturalist of the *Investigator* whom Mr. Wood-Mason had asked to observe these animals in life. In the "Administration Report of the Royal Indian Marine" for 1891-92, Dr. Alcock gives a description of the "whirring" sound produced by these crabs.

In these discoveries Mr. Wood-Mason has certainly added considerably to our knowledge of what may be termed the "powers of utterance" of the Arthropoda. Although in the case of the Crustacea they were not entirely unexpected, Mr. Wood-Mason's discoveries were complete and conclusive and may be allowed to take their place among the minor epochs of Natural History.

During his Assistant Curatorship, Mr. Wood-Mason had on several occasions officiated as Curator (or, as it was afterwards designated, *Superintendent*) of the Indian Museum and Professor of Comparative Anatomy and Zoology of the Medical College of Bengal, during the absence of Dr. Anderson. On the retirement of the latter in March 1887, he was permanently appointed to the dual post. In January 1888 he was elected a Fellow of the University of Calcutta.

Mr. Wood-Mason took a prominent part in every thing connected with the pursuit of zoological researches in Calcutta. In 1870 he became a Member of the Asiatic Society of Bengal, and in 1872 he was elected a Member of the Council of the Society. In the same year he was appointed Natural History Secretary, and in this capacity proved himself to be a very competent and energetic editor of the Society's publications. Except during the intervals of his absence from Calcutta he continued to fill this post until 1887 when he was elected Vice-President. During this period he was *ex-officio* a Member of the Committee of the Zoological Garden. He was one of the founders of the Microscopical Society of India, and for a considerable time its President; in its infancy the Society held its meetings at his house.

Mr. Wood-Mason's work in India was mainly restricted to Zoology, although he took an active interest in the Trustees' fine Archaeological collections, and contributed to the Journal of the Asiatic Society of Bengal a short but interesting paper "On some objects from a neolithic settlement recently discovered at Ranchi." As a student of Zoology in England he had taken up the study of the closely allied science of Palæontology, and in this branch had compiled a series of papers which



## REPORT OF THE TRUSTEES

were published in the Proceedings and Quarterly Journal of the Geological Society, and which exhibited an exceptionally good grasp of the subject for so young a Naturalist. The reason of his publishing no further palaeontological papers after his arrival in India may probably be found in the fact that that branch of science is illustrated in the Museum of the Geological Survey of India, whose officers devote themselves specially to its study.

In the autumn of 1892 Mr. Wood-Mason (who had been working continuously in the plains of Bengal with only short interruptions since his return from furlough in March 1884) found his health giving him considerable cause for anxiety. In December he availed himself of short leave, but returned apparently very little benefited by the change. It was evident that an entire and much more prolonged change was necessary; and Mr. Wood-Mason, who was anxious to consult the type specimens and the Library of the British Museum in connection with his "Catalogue of the Malacostracous Crustacea," believed that the sea voyage home would sufficiently re-establish his health to enable him to continue his work in England. He accordingly applied to be deputed to England for six months, and left Calcutta on 6th April on three months' privilege leave, in anticipation of sanction to the deputation, which had been duly recommended to the Secretary of State. A telegram received at the Museum on 10th May conveyed the sad news that he had passed away within two days' journey of home.

Mr. Wood-Mason possessed a very extensive acquaintance with Zoological literature and a remarkably retentive memory. By his death those of his brother Naturalists who have worked with him have lost a co-laborer who was full of resources, and was ever ready to place his abilities at their disposal; the Trustees have lost a zealous and painstaking officer whose labours have increased the value of the Museum collections to an extent that it is difficult to estimate; and the scientific world has lost a critical and observant inquirer into the secrets of nature who promised to leave his mark on the pages of Natural History.

The above memoir having been adopted, the Trustees unanimously passed the following resolution:—

"The Trustees of the Indian Museum desire to record their high appreciation of the valuable services rendered to the Institution by their late

## OF THE INDIAN MUSEUM.

Superintendent, Mr. J. Wood-Mason, and their sincere regret at the loss they have sustained by his untimely death."

2. The opening portion of last year's report discussed the recommendations of a Sub-Committee which was appointed late in 1890-91 to investigate and report upon certain questions connected with the administration and future development of the Indian Museum, and the relations of the Trustees with the Imperial and Provincial Governments; and set forth the action that was taken upon these recommendations in respect of the following matters:

(i) the formation of collections of the Products of India for the Imperial Institute, London, and certain Museums in India;

(ii) the temporary transfer of the executive charge of the Economic and Art Section of the Museum;

(iii) the provision of additional accommodation for the offices, laboratories and study collections of the Museum, and offices of the Geological Survey of India; and

(iv) the permanent increase of the grant for the Zoological and Archæological Section. In the succeeding paragraphs brief references will be made to these four subjects, in the order named.

3. In paragraph 2 of last year's reports it was explained that the connection of the Trustees with the work of forming collections of Economic Products for the Imperial Institute was entirely severed. Reference to this work, in so far as it is still associated with the Museum, will be made below, in the portion devoted to the Economic and Art Section.

4. The arrangement by which the Economic and Art Section was temporarily placed in the executive charge of the Officiating Reporter on Economic Products to the Govern-

## REPORT OF THE TRUSTEES

ment of India remained in force throughout the year and, on the whole, worked satisfactorily.

5. The question of the erection of a new wing for offices, studies, laboratories, storerooms, workshops, etc., for the Museum and the Geological Survey of India did not make much actual progress during the year, although the Sub-Committee appointed in connection with this matter have had several schemes under discussion. After consulting with the Director of the Geological Survey of India, the Superintendent of the Indian Museum submitted plans of a building to be erected on land in the direction of Chowringhee Lane, which the Government of Bengal are pledged to acquire and make over to the Trust for this purpose. But the Sub-Committee learned unofficially that there was little prospect of a scheme that involved considerable expenditure being undertaken at once, or even in the near future, owing to the general financial depression. Under these circumstances it became necessary to choose one of two alternatives : either to entirely abandon, for the time being, the question of building a new wing ; or to draw up a scheme which should include, not the total amount of accommodation that the Government of Bengal are under an obligation to provide, but the least amount that would suffice for the more pressing needs of the institution, and thus bring the estimate down to the lowest possible figure. The Sub-Committee determined to ascertain if any practical scheme could be devised with the latter alternative in view, which would meet with the approval of both the Government of Bengal and the Trustees ; and at the close of the year plans were under discussion for the erection of a four-storied building in rear of the Museum, on ground belonging to the Trust.

## OF THE INDIAN MUSEUM.

6. During the year the Government of India sanctioned a permanent increase of Rs. 3,500 to the grant for the Zoological and Archæological Section; they also sanctioned the revival of the gazetted appointment of Assistant Secretary to the Trustees. This matter is referred to in paragraph 13 of last year's Report. The sum asked for by the Trustees and provisionally agreed to by the Secretary to the Government of India in the Revenue and Agricultural Department, as a permanent increase to the grant, was Rs. 7,000. The Museum however—no doubt along with other institutions—suffered by the policy of retrenchment which the financial crisis compelled the Government to adopt; and the promised additional increase must remain in abeyance until the present general depression is relieved. Meanwhile the income of the Museum remains totally inadequate to its requirements, and many desirable undertakings will have to be indefinitely postponed for want of funds. *A fortiori*, little or no attempt can at present be made to carry out the extended proposals, to which reference is made in paragraph 14 of last year's Report, for the development of the Museum "as an active agency for the prosecution of zoological research, with a view to the further utilization of the natural resources of the country."

7. The Trustees record with satisfaction that a definite ruling has been given by the Government of India on the subject of the powers of the Trustees under the provisions of the Indian Museum Act in the matters of appointing officers to posts in the Trustees' service and granting those officers leave. The following is the history of the case, and as it is considered to be of importance, it is reported at some length. In November 1891 the Trustees granted six months'

## REPORT OF THE TRUSTEES

leave, on urgent private affairs, to Mr. W. L. Slater, then Deputy Superintendent of the Museum, and reported to Government that they had done so. Some demi-official correspondence followed between the Registrar, Revenue and Agricultural Department, and the Trustees' Office on the question of previous procedure, and subsequently the Under-Secretary to the Government of India in that Department wrote that Government had sanctioned the leave, but at the same time intimated that leave to Museum Officers should, in every case, be first sanctioned by Government. He also took objection to the action of the Trustees in having made arrangements for the conduct of affairs during Mr. Slater's absence, on the ground that, under the provisions of the Indian Museum Act, the appointment of even officiating officers should be first referred to Government. In reply, the Trustees pointed out that they had previously granted leave to their Officers, and that Government had definitely recognised this procedure on more than one occasion. In regard to the officiating appointments, the Trustees drew attention to the fact that they had informed the Officers that the appointments were made subject to confirmation by Government, and they had at once reported the matter to Government for confirmation. The Trustees added :—

“In conclusion I am to suggest that, for many reasons, it is very desirable that the Trustees should be allowed the fullest possible scope in dealing with questions concerning the internal economy of the Trust. The Government of India, by an Act of the Legislative Council, have incorporated a Board of Trustees, and the various appointing authorities under this Act have selected Members to represent them at the Board, many of whom are men of experience holding positions of responsibility in various spheres. As at present constituted the Board consists of the Revenue Secretary, and the Accountant-General of Bengal, the Heads

## OF THE INDIAN MUSEUM.

of the principal Imperial and Provincial Scientific Departments, the Directors of Public Instruction and of Agriculture, Bengal, and other Official Members, a leading representative of the English commercial community in Calcutta, and two of Hindu and one of Mahomedan Calcutta society. The Board is therefore distinctly representative, and many of its Members possess special qualifications for the work with which they have been entrusted. Moreover, those Members who form the two principal Sub-Committees of the Board are daily in touch with the business of the Museum and the work of its Officers. It is evident that no other authority can possibly be in so good a position to arrive at a practical decision—in the best interests of the Institution—on any question connected with its administration. To restrict the Board to exercising powers that the Head of a department would usually exercise on his own individual responsibility, and to reduce the Board to a mere channel of communication between the Government and the Executive Officers in other matters, appear to be hardly the best ways of utilising the administrative machinery that exists."

In reply to this letter the Secretary to Government of India in the Revenue and Agricultural Department wrote that the previous procedure in the matter of granting leave did not appear to be strictly in accordance with the law, and repeated the opinion that the appointment of Museum Officers required the previous sanction of Government. He added :—

"In order that there may be no future misapprehension, His Excellency in Council is accordingly pleased to direct that, except in cases of urgency, the previous sanction of the Government of India shall be obtained by the Trustees to the appointment, substantive or officiating, of Museum Officers, and that applications for leave shall be received by the Trustees, but forwarded for sanction by the Government of India in accordance with Articles 889 (a) and 910 (a) of the Civil Service Regulations."

In a concluding paragraph the Secretary to Government assured the Trustees that the Government of India—

"are far from intending to usurp or weaken the Trustees' authority over the Officers appointed by them, and that, as regards appointments and leave, the fullest respect will be paid to their recommendations."

## REPORT OF THE TRUSTEES

In view of previous precedents and the wording of the Act, the Trustees did not feel justified in accepting this ruling. A special meeting was convened to discuss the matter, the papers having been previously printed and circulated. At that meeting it was decided to again address the Government on the subject, and a letter (No. 89 A, dated 17th June 1892) was accordingly written soliciting them to reconsider their decision. The Trustees dealt very fully with both questions, and forwarded, in support of their views, a précis showing the exact procedure in the case of each substantive appointment since the incorporation of the Trust, as well as in several cases of leave and officiating appointments, and they asked the Government of India that they might be allowed—

- (1) " to make appointments of gazetted officers of the Trust with the final approval of the higher authority under the terms of Section 8, clause (a) of the Act, as explained in paragraph 7 of this letter, as was done, with the full approval and concurrence of the Government of India, in the case of Mr. Solater in 1887; and that they may be empowered to make officiating appointments of officers already in the service of the Trust in anticipation of the approval of the Government of India in cases where it may be necessary to do so for the efficient carrying on of the work of the Museum;
- (2) " that the Trustees may be allowed to continue to exercise the power of giving privilege leave to their gazetted officers which was conferred upon them by the Government of India in 1887 under the Act, and, it is believed, in accordance with Section 17 (a), Supplement F of the Civil Leave Code, which was in force at that date; and that, if necessary, fresh powers to this effect may be formally delegated to them in the same way as similar powers of the Local Government have been delegated to other authorities under Sections 40 and 41 of the Civil Service Regulations."

## OF THE INDIAN MUSEUM.

As the reply from the Secretary to the Government of India, Revenue and Agricultural Department, No. <sup>2621</sup><sub>1</sub> M. & E., dated 16th September 1892, settles the question finally, it is recorded below in full—

“ I am directed to acknowledge the receipt of your letter, No. 89-A., dated 17th June last, in which are conveyed the remarks of the Trustees upon the letter from this Department, No. 1123, dated 11th May last, explaining the procedure to be followed in the appointment of, and grant of leave to, officers of the Indian Museum.

“ 2. It is understood that the Trustees desire—

(i) power to grant privilege leave;

(ii) power to make substantive appointments and officiating appointments without previous reference to the Government of India.

“ With reference to the question of leave, the Government of India, on reconsideration, are of opinion that the intention of Section 14 of Act XXII of 1876 will be fully satisfied by an interpretation which would enable the Trustees of their own authority to grant any such leave as the Civil Service Regulations allow to be granted. The officers and servants of the Trust are to be subject to these regulations, and can only obtain leave permissible under them; but the power of granting any kind of leave which is so permissible is vested in the Trustees absolutely.

“ As regards the second point, I am to explain that it has never been intended to detract in any respect from the power which both before and after the passing of the Museum Act of 1876 resided in the Trustees to select and nominate gazetted officers to the posts controlled by the Trust. I am, however, to draw attention to

\* Revenue and Agricultural Department No. 223, dated the 14th December 1872. the fact that the orders\* passed on the memorial of the Trustees, No. 796, dated 15th June 1872, required that the Secretary of State's concurrence and approval of their nominate should be obtained before the officer starts for India. To this principle the Act of 1876 was intended to give effect. The appointment of an officer is made whenever he receives the order to join his post, and to this order the previous approval of the Government of India, or of the Secretary of State, as the case may be, appears to be required under the law.

“ 3. As above explained, the Government of India have no intention



## REPORT OF THE TRUSTEES

of interfering with the powers conferred upon the Trustees by the Act, even if they were competent to do so. They merely wished, in their letter of 11th May 1892, to indicate clearly what those powers were. They are unable to discover any reason for doubting that the interpretation laid down was correct, except so far as leave is concerned; nor do they apprehend that it will cause any practical change in the administration of Museum affairs.

"4. The Governor General in Council much regrets that a misunderstanding should have arisen upon this question, and instructs me to assure the Trustees of the cordial appreciation with which he has never ceased to regard the public spirit in which they have discharged their important functions, and of his earnest desire to maintain their authority and powers for usefulness unimpaired."

The Trustees acknowledged this letter with an expression of their thanks, adding with reference to the third clause (of the 2nd paragraph)—

"I am to point out that the order referred to as to the concurrence of the Secretary of State to the appointment of the Trustees' nominee was known to, and has been fully admitted by, them (*vide* paragraph 8 of their letter No. 89 A., to which your letter now under acknowledgment is the reply), and they accept your letter as fully confirming them in this power of selection and nomination, and, subject to the approval required under the Act I, of appointment.

"In conclusion, I am to say that it has afforded the Trustees the greatest satisfaction to receive so cordial an assurance of the appreciation of their efforts by the Governor General in Council and of his desire to maintain their authority and powers of usefulness unimpaired. The principle which has guided them throughout the conduct of their Trust has been to secure by legitimate and equitable methods the greatest possible benefits for the Museum from the means at their disposal, with a view to the gradual improvement and development of the Institution, and in this respect the interests and aims of the Government and of the Trustees must always be identical."

## ZOOLOGICAL AND ARCHÆOLOGICAL SECTION.

8. The Trustees are glad to be able to report that good progress was made during the year in the important business

## OF THE INDIAN MUSEUM.

of working out and arranging the Museum collections. Mr. Wood-Mason continued to work at the Crustacea, and Dr. Alcock, Surgeon-Naturalist to the Marine Survey, at the deep-sea Fishes, their joint researches resulting, *inter alia*, in the publication of Part I of the "Illustrations of the Zoology of Her Majesty's Indian Marine Surveying Steamer *Investigator*", to which reference was made in paragraph 17 of last year's Report. Dr. Alcock also determined the deep-sea Asteroidea collected by the *Investigator*; while the Alcyonarian corals were sent to Mr. Slater, and the Hexactinellid sponges to Professor F. E. Schulze, for determination. In the Entomological Section the Museum collections of Odonata, Histeridæ and Staphylinidæ were returned named by M. le Baron de Selys Longchamps, Mr. G. Lewis, and M. A. Fauvel, respectively. In the exhibition galleries Mr. Fraser re-arranged, and partially re-ticketed, the mounted collection of Mammal heads and horns, and superintended the displaying of the Sikri casts of Moghul decorative architecture on the walls of the "Inscription" Gallery.

9. Some further progress was made in the equally important work of cataloguing the Museum collections. Although the only catalogue actually completed and published during the year was the "List of Batrachia in the Indian Museum" compiled by Mr. W. L. Slater, several other catalogues that are in progress were advanced a stage; among them being Mr. Wood-Mason's Catalogues of Mantodea and of Malacostracous Crustacea (the manuscript of which it is hoped that means may be found to utilise), and Mr. Rodgers' Catalogue of Coins, part of which was pressed off. The major portion of Mr. Fleming's first supplement to the Library Catalogue was also in type at the close of the year. Parts II and

## REPORT OF THE TRUSTEES

III of M. Bigot's Catalogue of Oriental Diptera (compiled in continuation of the Catalogues of Oriental Insecta inaugurated by the late Mr. E. T. Atkinson) were published as supplements to the Journal of the Asiatic Society of Bengal, and separately issued by the Trustees; but as this work does not indicate which species are represented in the Museum, it cannot rank as an Indian Museum Catalogue, although a very useful publication. Mr. W. L. Distant's Monograph of the Oriental Cicadidæ, which forms an exhaustive and copiously illustrated list of the Oriental species of this family, was also completed and published; while scientific papers referring to specimens in the Museum by Mr. Wood-Mason, Dr. Alcock, and Mr. Sclater, appeared in the publications of several of the learned societies.

10. As usual, a very large number of references on matters connected with Insects of economic interest were received in the Entomological Section during the year. Many of them were accompanied by live specimens, which were reared in the Museum. Experimental rearings of Mulberry silkworms were also carried out, both from Bengal seed kindly supplied by the Agri-Horticultural Society, and from European seed received from Italy through the Reporter on Economic Products to the Government of India. Two numbers of "Indian Museum Notes" were published, and a third prepared during the year. They contain, in addition to miscellaneous notes on Economic Entomology by various authors, a further report on the Locusts of North-West India, and a useful conspectus of Insects injurious to Indian Agriculture, both compiled by Mr. E. C. Cotes. Arrangements have been made by the Revenue and Agricultural Department of the Government of India to distribute interleaved copies of the latter publication among

## OF THE INDIAN MUSEUM.

district and local officers and others, and to invite their co-operation, with a view to obtaining a more complete knowledge of the subject, when a revised edition of the work will be prepared. Mr. Cotes also compiled a Hand-book on Indian Silk and Silk Insects, to form one of the series of the Imperial Institute Hand-books on Indian Products.

11. Very little field work was undertaken during the year. Mr. E. C. S. Baker, a correspondent of, and liberal donor to, the Museum, offered to supervise the work of a skinner in North Cachar, on the condition of his sharing in both the expenses and the results. Sheik Jaffa was accordingly deputed to Cachar for about four months. Mr. Baker reported very unfavourably of the man, who appears to have shirked his work as much as possible. The results were, on the whole, disappointing, and soon after Sheik Jaffa's return, on the recommendation of the Superintendent, the Trustees dispensed with his services altogether. Dr. A. Alcock, Deputy Sanitary Commissioner, Metropolitan and Eastern Circle, Bengal, offered to take a collector with him on a short tour by boat in Eastern Bengal. Moti Ram was accordingly deputed to accompany him, and some good specimens were obtained.

12. The decrease, which has been remarked in the Reports for the past two years, in the number of specimens registered in the annual list of accessions, has again to be recorded for the year under review, the total for which is by far the lowest since 1878-79. A part of this decrease is no doubt due to the fact that there were no funds available to expend on collecting. Whatever other factors may have combined to reduce the number of new specimens brought upon the Museum books, the indirect result has been rather advantageous to the Institution than otherwise, in that a good deal

## REPORT OF THE TRUSTEES

of the time of the very small staff of the Museum that would have been occupied in superintending the work of arranging large collections of miscellaneous specimens into groups and families, of ticketing and registering them, and of mounting, setting, or rebottling them in detail, has been available for the systematic study of particular groups, or the preparation of such groups for special study by volunteers from outside. The Museum cabinets illustrating many of the families are now in a condition in which the promiscuous collection of miscellaneous specimens is a waste of both time and preserving materials; and it is evident that, when funds become available for further collecting, the more systematic and complete the arrangement of the Museum collections, the greater the possibilities of expending such funds economically and profitably. Among the accessions, in the Department of Zoology during the year under review, worthy of special mention are the fine series of marine specimens, many of them deep-sea forms of great rarity, collected by the Officers of Her Majesty's Indian Marine Steamer *Investigator*; the Crustacea presented, respectively, by Captains Wicks and Row and Mr. Daly; the Mollusca received in exchange from Mr. Fulton; the Tibetan Black Wolves and Yak presented by Colonel J. Fraser; the Snakes and Land Crabs received from the Trevandrum Museum; the types of Ganoid Fishes presented by Mr. S. J. Harmer of the Cambridge University Museum; the Birds of Paradise purchased from Mr. W. Doherty's collector; and the Odonata presented by M. le Baron de Selys Longchamps. In the Archæological Section the most important accession was the large coin collection, of which mention was made in paragraph 26 of last year's Report, and which will be designated the "Rivett-

## OF THE INDIAN MUSEUM.

Carnac" collection. A set of casts illustrating Moghul decorative architecture from Fatehpur Sikri, presented by Government; a share of the Bagli find of coins presented to the Museum by the Gwalior Durbar; and some coins presented by the Punjab Archaeological Survey, are also worthy of mention.

13. Thanks to the liberality of the Provincial Government, the Trustees were able to continue the work they had commenced in the previous year in connection with the Archaeology of Bengal. The two main features of this work were the removal to the Museum of such sculptures or other objects of archaeological interest as were lying uncared for and were capable of being readily removed; and the formation of a complete pictorial record of those that could not be removed. From the point of view of the Museum the results of the year's work cannot be favourably compared with those of 1891-92. The site fixed upon for operations was Orissa, with the Black Pagoda at Kanarak as the principal object of the deputation. The fallen "Navagraha" or carved architrave from the entrance to that temple promised to be a very valuable acquisition to the Museum. A previous attempt to bring it to Calcutta is referred to in the Trustees' Proceedings, dated 11th January 1869. On that occasion the principal obstacle to its removal was its great weight, estimated at about 28 tons, and the attempt was abandoned owing to the grant of R3,000 being insufficient to complete the undertaking. In the present instance an obstacle presented itself from an entirely unexpected quarter. Since the previous occasion, an attempt had been made to lighten the stone by cutting away a mass of the uncarved portion from the back. It was now decided to complete this attempt, and masons were accordingly set

## REPORT OF THE TRUSTEES

to work. The lightening process was carried out, apparently without interference from Pujaris or others; but when this was completed, a representation was made to His Honour the Lieutenant-Governor by telegraph objecting to the removal of the stone on the ground that it had become an object of local worship. It was subsequently reported that the stone had acquired a reputation as a healer of diseases, more especially of leprosy, and that it yielded a small income to certain Pujaris who officiated at its services. At the request of Government the question as to whether these objections should be overruled or not was referred to a Joint Committee of the Native Members (a) of the Council of the Asiatic Society of Bengal, and (b) of the Board of Trustees of the Museum, who put themselves to great trouble to thoroughly sift the matter. They finally reported against the removal of the stone, and their recommendation was accepted by His Honour. It was evident therefore that the Trustees must content themselves with a good collection of the smaller sculptures and as complete a pictorial record as possible. The sanction included a small separate grant for photographic materials, and Government permitted Mr. W. H. Cornish, District Superintendent of Police at Cuttack, and an enthusiastic amateur photographer, to undertake this branch of the work. Mr. P. C. Mukerji, temporary Archæologist, who had devoted his time, since his return from a short preliminary tour in the previous May, to the amplification of his Behar Report, left for Orissa early in October 1892, accompanied by two draftsmen, and returned at the end of January 1893, bringing with him a considerable number of unfinished drawings of archæological remains in Orissa—a few of which referred to the Kanarak Temple—and some eight fragments of sculpture from Puri.

## OF THE INDIAN MUSEUM.

At a conference between His Honour the Lieutenant-Governor and the Chairman of the Trustees, at which these drawings were inspected, it was decided that Mr. Mukerji and his draftsmen should at once return to Kanarak to complete the pictorial record of the Black Pagoda. They accordingly left Calcutta on the 28th February, and had not returned at the close of the year under review. Mr. Mukerji reports that they have made in all 36 drawings from the temple in question. Neither have the photographic negatives obtained by Mr. Cornish yet been received, but a sample of selected proofs submitted by that officer contain some very good pictures, and give promise that the series will form a valuable addition to the Museum cabinet of photographic negatives of archæological subjects. The Trustees note with satisfaction, as an indirect result of the year's work, that certain ancient structures in Orissa, including the Black Pagoda, have been reported upon by the Public Works Department, with a view to their conservation by Government. As, however, this aspect of the subject is outside the Trustees' sphere of action, details are not included in this report. It is understood that the Government of Bengal will sanction a further grant for 1892-93, when the Trustees will endeavour to obtain, for preservation in the Museum, a representative series of Orissan sculptures from such fragments as are neither *in situ* nor under proper care, of which Mr. Mukerji reports there are a large number.

14. Some important changes have been made in the non-gazetted establishment during the year. Mr. Fleming, although nominally officiating as Registrar, remained in charge of the Library and Superintendent's Office throughout the year, and performed the duties with diligence and regularity. The increase sanctioned by Government to the permanent grant



## REPORT OF THE TRUSTEES

for this Section has rendered it possible to appoint a subordinate to assist the Superintendent in his scientific work quite independently of the Superintendent's regular office staff which transacts the general business of the Superintendent, as executive head of the Institution. Mr. Perie, Superintendent's Clerk, and nominally Officiating Librarian, was selected for this appointment, under the designation of "Personal Assistant to the Superintendent," and has given every satisfaction in his new capacity. Mr. Gantzer has been permanently appointed as an addition to the Taxidermist staff. After giving him several warnings, the Superintendent found himself compelled to recommend that the services of B. L. Dass, Artist, should be dispensed with, on account of frequent and prolonged absences without leave; and an efficient substitute was found in A. C. Chowdhary, formerly Artist to the Surgeon-Naturalist of the Marine Survey. Other changes of minor importance were made.

15. The Superintendent, Mr. J. Wood-Mason, was in charge of the Zoological and Archæological Section throughout the year, with the exception of a short period of fourteen days' absence on casual leave, during which Mr. Thurston, Officiating Reporter on Economic Products to the Government of India, was in consultative charge of the Section. The Officiating Deputy Superintendent, Mr. E. C. Cotes, was on privilege leave from 28th June to 8th October, and on deputation to the Forest School, Dehra Dun, to deliver a course of lectures on Forest Zoology from 9th October to 6th December; during the remainder of the year he was in charge of the Entomological Section. Mr. Cotes has since been confirmed in the appointment of Deputy Superintendent. Mr. R. L. Chapman officiated as First Assistant to the Superintendent throughout the

## OF THE INDIAN MUSEUM.

year; and during the two absences of Mr. Cotes he was in charge of the Entomological Section and of the current duties of the Deputy Superintendent in addition to his own. He was in charge of the latter when Mr. Wood-Mason applied for casual leave, when he was authorised to perform the routine duties of the Superintendent, subject, in any question of importance, to his consulting Mr. Thurston, who consented to act honorarily as Superintendent during Mr. Wood-Mason's short absence. The Second Assistant to the Superintendent, Mr. O. L. Fraser, superintended the Taxidermists and other Museum operatives, had the buildings and exhibited collections under his general surveillance, and held charge of the Museum stores and workshops throughout the year.

16. During the period under review the Trustees were fortunate in enlisting the services of a number of volunteers in various branches of Archæology and Zoology. Dr. A. F. R. Hœrnle on several occasions assisted the Trustees with his valuable advice in matters numismatic, and spared himself no trouble in revising the proofs of the Coin Catalogue; Mr. Grier-son consented to review Mr. P. C. Mukerji's Bihar Archæological Report in manuscript; Dr. A. Alcock, while filling the post of Deputy Sanitary Commissioner of Bengal, continued to do good service for the Trustees in various branches of Zoology; Mr. W. L. Sclater, formerly Deputy Superintendent of the Museum, but now Lecturer on Biology at Eton, worked at the Museum frogs, snakes and corals, and Professor E. Schulze at the sponges; while M. le Baron de Selys Longchamps, Messrs. G. Lewis, A. Fauvel, G. B. Buckton, F. M. van der Wulp, W. M. Maskell, F. Moore, J. H. Durrant, L. Lethierry and R. C. Wroughton also rendered valuable assistance in connection with the various groups of Insects in which they are severally interested.

## REPORT OF THE TRUSTEES

17. The Trustees record their high appreciation of the useful work done by all the staff of the Zoological and Archaeological Section, and tender their warm thanks to the gentlemen who have voluntarily rendered such valuable assistance during the year under review.

### ECONOMIC AND ART SECTION.

18. The most important work in this Section of the Museum during the year was the arrangement of the specimens in the new Sudder Street extension, in which very satisfactory progress was made. In August 1892 the Officer in charge reported that the arrangement of the Art Court was complete. His Honour the Lieutenant-Governor visited the Court unofficially in company with the Chairman of the Trustees; and on 1st September the Court was opened to the general public. The Ethnological Court was subsequently opened to the public on 1st January 1893. Both these Courts are very popular with visitors to the Museum; and while the Art Court is specially resorted to by ordinary sight-seers, the Ethnological Court should prove of great interest to students. During the arrangement of the latter further advances were made towards completing the collections, especially those illustrating some of the more primitive tribes of Chota Nagpur, Southern India, and the Andamans.

19. Little progress was made in the Economic Court, except in so far as that Court benefited by the work that was carried out primarily on behalf of the Imperial Institute. This work is in charge of the Reporter on Economic Products to the Government of India, but, as mentioned in paragraph 39 of last year's Report, the Museum receives a sample of each product collected. Throughout the year the collection of both specimens and information was actively

## OF THE INDIAN MUSEUM.

carried on ; and a number of useful Hand-books on individual products were compiled by Mr. Thurston, assisted in the cases of "Coal" and "Mica" by Dr. W. King, Director of the Geological Survey, and Mr. T. H. Holland, Assistant Superintendent of the same Department, respectively.

20. Some further specimens of Art-manufactures from the extinct Shillong Museum were incorporated with the Museum collections.

21. Other additions worthy of note are :—in the Ethnological Court (i) a very interesting collection of specimens illustrating the Santals and Oraons for which the Museum is indebted to Mr. J. Cleghorn, Executive Engineer, Public Works Department ; and (ii) a series of excellent photographs of the Andamanese taken by Mr. V. Portman, Assistant Superintendent, Port Blair ; and in the Art Court (i) a collection of the silver jewellery worn by the peasantry of the Simla Hills, (ii) some cotton fabrics from Bengal, and (iii) mats from Tanjore and Tinnevely.

22. Mr. E. Thurston, Officiating Reporter on Economic Products to the Government of India, was in charge of the Section throughout the year, although he was actually present in Calcutta during only a portion of that period. In his absence Mr. T. N. Mukherji, Assistant Curator, held charge of the current duties of the office.

23. The Trustees record their appreciation of the useful work performed by the staff of the Economic and Art Section during the year.

## TRUSTEES' OFFICE.

24. In the foregoing portion of the Report, under the heading "General Administration," it is incidentally men-

## REPORT OF THE TRUSTEES

tioned that the Government of India have consented to revive the gazetted appointment of Assistant Secretary to the Trustees. Financial reasons, however, prevented their sanctioning the proposal to revert to the old rate of pay of this appointment; although they were willing to consolidate the salary previously sanctioned to the Registrar from Museum funds and any allowance he might draw as Assistant Secretary from Provincial Revenues. The Trustees therefore renewed their application for a permanent contribution from the Government of Bengal, in connection with the administration of the Economic and Art Section; and His Honour the Lieutenant-Governor subsequently discussed the matter in conference with the Chairman of the Trustees. As a result the Government of Bengal have consented to provide funds to raise the maximum of the pay of the Assistant Secretaryship to the sum it formerly stood at, *viz.*, Rs500 per mensem, and have recommended the matter to the Government of India for sanction by the Secretary of State.

25. The Officiating First Assistant to the Superintendent, Mr. R. L. Chapman, remained in charge of the Trustees' Office throughout the year—an arrangement which is proposed to continue until the First Assistantship is substantively filled. The work of the Trustees' Office does not tend to diminish, although the introduction from time to time of improved methods of dealing with routine matters have facilitated the transaction of business. The Secretariat work—as distinguished from the mere routine work of the Office—was unusually heavy during the year. Both branches of the office work were conducted by Mr. Chapman with zeal and discretion.

26. The accounts for the year have been duly audited and

## OF THE INDIAN MUSEUM.

passed. An abstract of the receipts and expenditure in both Sections is appended.

### THE COLLECTIONS.

27. So far as is known the collections are all in good order and preservation.

W. KING,  
*Honorary Secretary.*

G. KING,  
*Chairman.*

# REPORT OF THE TRUSTEES

## *Abstract of Receipts and Expenditure of the Zoological and 1892 to 31st*

RECEIPTS.					
	R	a.	p.	R	a. p.
India Government grant for pay of non-gazetted establishment and personal allowance for Second Assistant to Superintendent . . .	14,419	9	7		
Amount sanctioned for non-gazetted officiating appointments . . . . .	1,020	0	0		
				15,439	9 7
India Government grant for contingent charges for the year 1892-93 . . . . .	14,782	15	11		
Savings on gazetted establishment, 1891-92 . . . . .	1,483	8	9		
Savings on non-gazetted establishment, 1891-92 . . . . .	746	5	8		
				17,012	14 4
India Government special grant for the preparation of an Amalgamated List of Photo-Negatives in the Indian Museum, of Indian Archæological subjects . . . . .	...			200	0 0
India Government special grant in connection with the Indian Museum collection of coins . . . . .	...			2,000	0 0
Bengal Government special grant for a series of illustrations of the Black Pagoda and other Archæological remains in Orissa, 1892-93 . . . . .	...			6,750	0 0
Sundry petty receipts . . . . .	...			2,695	3 7
<b>TOTAL RECEIPTS</b> . . . . .	...			44,097	11 6
Opening balance of Suspense Accounts, 1st April 1892 . . . . .	362	2	8		
" " at Bank of Bengal 1st April 1892 . . . . .	65	13	5		
" " in hand, 1st April 1892 . . . . .	249	0	7	677	0 8
	...			44,774	12 2

R. LEONARD CHAPMAN,  
*Officiating First Assistant.*

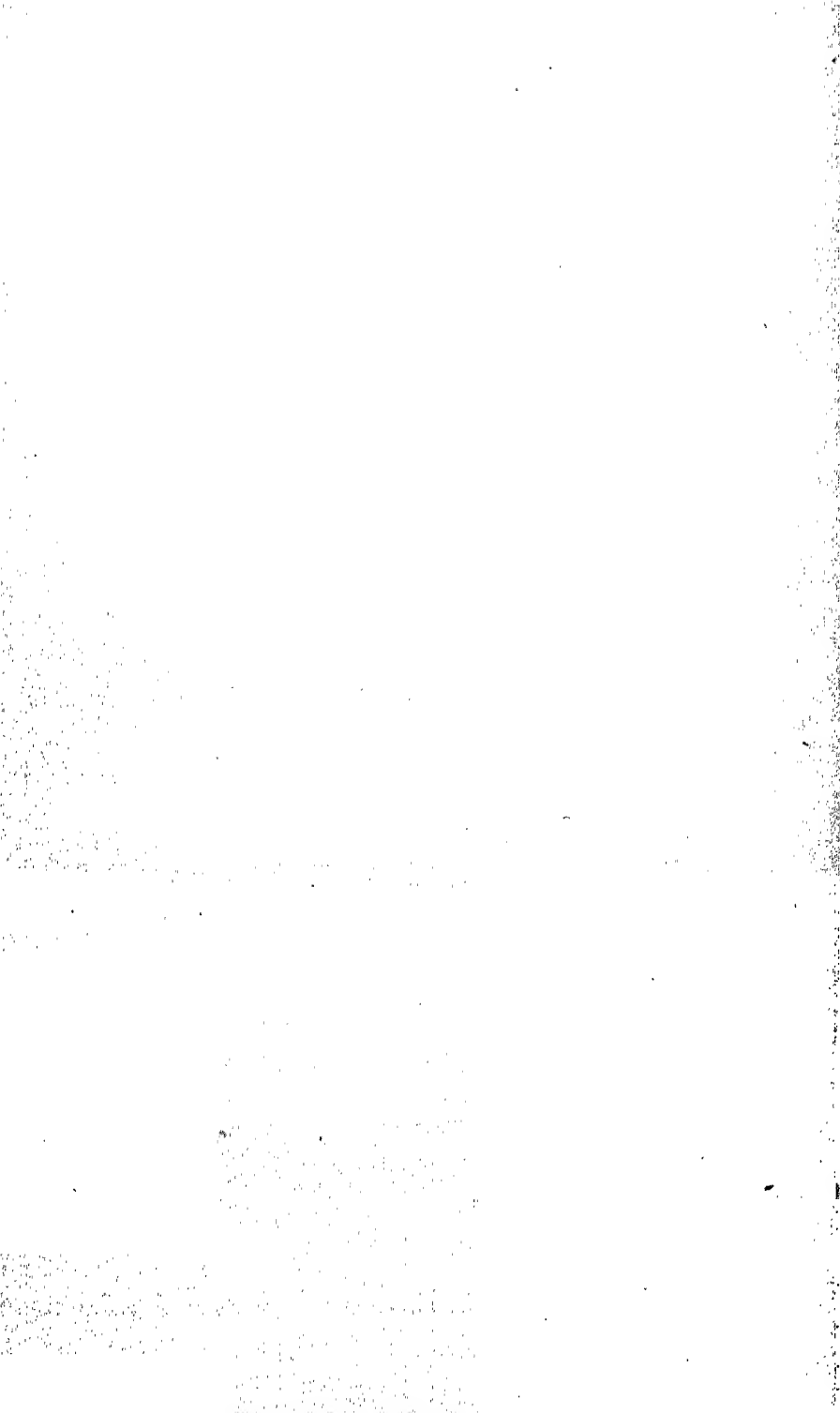
# OF THE INDIAN MUSEUM.

*Archæological Section of the Indian Museum, from 1st April  
March 1893.*

EXPENDITURE.					
	R	a.	p.	R	a. p.
Pay of non-gazetted establishment . . . . .	18,219	9	7		
Personal allowance to Second Assistant to Superintendent . . . . .	1,200	0	0		
Cost of non-gazetted officiating appointments . . . . .	1,020	0	0		
Supplementary establishment . . . . .	...			15,439	9 7
Books for Library . . . . .	...			936	8 1
Printing . . . . .	...			3,705	11 11
Purchase of specimens . . . . .	...			3,446	12 0
Postage . . . . .	...			952	12 0
Unusual charges—				403	6 6
(a) Archæology . . . . .	4,848	13	0		
(b) Futehpur-Sikri Casts . . . . .	114	4	0		
(c) Deputations . . . . .	230	13	3		
(d) Gratuity to Mr. Janson in connection with the 2nd Yarkand Mission collections . . . . .	200	0	0		
(e) Compilation of "Amalgamated List of Photo-Negatives" . . . . .	100	0	0		
Packing and freights . . . . .	...			5,493	14 3
Furniture (cases, jars, etc.) . . . . .	...			1,809	5 4
Drugs (alcohol, naphthaline) . . . . .	...			5,873	13 4
Stationery . . . . .	...			915	9 7
Special Museum stores . . . . .	...			483	13 10
General Museum stores and contingencies . . . . .	...			820	14 10
				561	2 9
<b>TOTAL EXPENDITURE . . . . .</b>	...			40,843	6 0
Closing balance of Suspense Accounts, 31st March 1893 (to be recovered or accounted for in 1893-94) . . . . .	...			1,310	7 9
Closing balance in Bank, 31st March 1893:—					
Bengal Government Archæological grant . . . . .	1,901	3	0		
Less, being the amount advanced from Museum Funds for this work during 1891-92 . . . . .	105	2	10		
	1,796	0	2		
Zoological and Archæological Section general funds . . . . .	787	9	8		
				2,583	9 10
Closing balance in hand . . . . .	...			37	4 7
	...			44,774	12 2

A. F. RUDOLF HERNLE,  
*Honorary Treasurer.*





# REPORT OF THE SUPERINTENDENT

FOR THE YEAR 1892-93.

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## SUPERINTENDENT.

During the past year the time of the Superintendent has been occupied as follows :—

- (1) in routine Museum work, including—
  - (a) the inspection of the Museum before and after repairs ;
  - (b) the inspection and safeguarding of the collections before the rains ;
  - (c) the sorting, registration and storing of newly acquired zoological material ; and
  - (d) the identification of specimens for the information of Museum correspondents ;
- (2) in the preparation of estimates and plans for the new extension of the Museum buildings ;
- (3) in the preparation of bibliographical material for the catalogues of the Museum collections of Mantodea and Crustacea ;
- (4) in reporting upon the Crustacea, now in the Museum, that have been dredged in recent years by Her Majesty's Indian Marine Surveying Steamer *Investigator* : these reports occupy three papers, with ten illustrative woodcuts and four plates, in the *Annals and Magazine of Natural History* for the years

## REPORT OF THE SUPERINTENDENT,

1892-93 ; and five quarto plates of the " Illustrations of the Zoology of Her Majesty's Indian Marine Surveying Steamer *Investigator* ;

- (5) in preparing an account, with four quarto plates of illustrations of the collection of Stomatopod Crustacea.

### DEPUTY SUPERINTENDENT.

Mr. W. L. Sclater, M.A., resigned his appointment on the 9th May, 1892, but he still continues to work in the interests of the Museum, having prepared a list of the collection of Batrachia, and having now with him for determination and description a large collection of Alcyonarian corals.

Mr. E. C. Cotes, who officiated for Mr. Sclater during his absence and succeeded him on his resignation, was on privilege leave from the 28th of June to the 7th of October, and on the expiration of his leave was on deputation as Lecturer on Entomology at the Forest School, Dehra Dun, until 7th December, when he resumed charge of the Entomological Section. In his absence Mr. R. L. Chapman held charge of the Entomological collections.

Mr. Cotes has furnished the following report of his work during the past year :—

Except for the steady accession of specimens there is little to report in connection with the entomological collections during the year. The specimens stored in the Entomological room, which comprise the bulk of the collections, are in good order, but the Lepidoptera exhibited in the Invertebrate gallery on the ground-floor, have suffered a good deal from the damp, in spite of the constant attention which has been bestowed upon them. The Museum collection of Indian insects is one of the largest in the world and if suitably exhibited would undoubtedly form a most attractive feature of the Museum. For this purpose, however, it is essential to provide space in some dry place well removed from the

## INDIAN MUSEUM.

ground-floor, as experience shows that a ground-floor room in Calcutta, like the present Invertebrate gallery, is totally unsuited for dried insects which are necessarily extremely susceptible to the slightest damp. Fortunately the series at present exhibited in the Invertebrate gallery comprises only a very small section of the whole collection, but it would be desirable to have it transferred to some dryer part of the Museum as soon as space is available.

The number of accessions registered during the year amounts to 1,205. Amongst these may be specially noticed a collection of Odonata presented by Mons. le Baron de Selys-Longchamps, a small set of Histeridæ presented by Mr. George Lewis, a number of Formicidæ presented by Mr. R. C. Wroughton, and numerous miscellaneous specimens transferred from the Shillong Museum.

During the year the Museum collections of Odonata, Histeridæ, and Staphylinidæ, which have been determined by Mons. le Baron de Selys-Longchamps, Mr. George Lewis, and Mons. A. Fauvell, respectively, were returned to the Museum. A small number of parasitic Tachinæ reared in the Entomological Section from various defoliating caterpillars, were sent to Heer F. M. Vander Wulp, who has kindly undertaken to examine them. Besides these, a few specimens of destructive and other species are still in the hands of the various specialists to whom they have been submitted for examination, but none of them are of any considerable value.

In addition to the curating of the collections, the work done in the Entomological Section during the year has been almost entirely connected with Economic Entomology. Amongst the more important publications prepared during the year may be noticed.—(1) The final report on the Locust of North-West India. This was drawn up to complete the record of the information collected in the course of the investigation undertaken upon the subject under the orders of the Trustees. It has been sanctioned for publication in *Indian Museum Notes*, Vol. III, No. 2. (2) A general account of the Silk and Silk Insects of India. This was prepared in accordance with the orders of the Trustees, at the request of the Government of India. It is being published as one of the Handbooks of the Imperial Institute in London. (3) A general Manual of Forest Zoology. This work was undertaken in accordance with the orders of the Trustees at the request of the Forest Depart-

## REPORT OF THE SUPERINTENDENT,

ment. It is not yet completed. (4) A general conspectus of Insects which affect crops in India. This work, which is mentioned in last year's report, was undertaken in accordance with the orders of the Trustees at the request of the Government of India. It has been revised during the year on the suggestion of the Government so as to include full information upon the subject of the plants reported as attacked by insects in India, and has been published as Vol. II, No. 6, of the periodical *Indian Museum Notes*.

The collection of fresh information relating to Economic Entomology has been chiefly confined to rearing and identifying insects which have been sent to the Museum from all parts of India as injuring crops. The references of this kind that have been made during the year to the Entomological Section have been numerous, and the work involved in dealing with them has accordingly been very considerable. In each case any available information that seemed likely to be of practical use has been furnished to those who have applied for it. In determining the specimens, reference has had frequently to be made to Entomologists in various parts of the world who have made special studies of particular groups of insects, which it would be useless to attempt to identify in India where so few type specimens are available for comparison. Much help has in this way been received, thanks being specially due in this connection to Mr. G. B. Buckton, F.R.S., Mr. W. M. Maskell, F.R.M.S., Mr. F. Moore, F.Z.S., Mr. J. H. Durrant, Mons. Lethierry, and Mons. Auguste Forel.

With regard to the distribution of the work of the Entomological Section during the year,—I was in charge of the Section from the 1st April until the 27th June, and again from the 7th December until the 31st March. During the remaining months Mr. R. L. Chapman was in charge, and I would take this opportunity to again express my appreciation of the business-like manner in which he looked after the current work. The post of clerk was efficiently filled during the year by Mr. Edward Barlow, who kept up the register of accessions and in spite of ill-health, made himself very useful in arranging and comparing specimens and in attending to the rearing cages. The post of artist was satisfactorily filled by Babu Grish Chunder Chuckerbuttery, who was engaged, as usual, in drawing specimens for reproduction in *Indian Museum Notes*. The post of copyist was filled at first by Babu Amulya

## INDIAN MUSEUM.

Dhon Banerjee, and on his resignation by Babu Binod Bihari Mukerji. The latter is an excellent writer and gives complete satisfaction; but I would call attention to the fact that the experience of the past two years shows that the pay of the post he holds is not sufficient to induce competent men like himself to accept it otherwise than as a *pis aller*. Of the three setters, who do the manual work of setting up specimens, Latif Rahman and Phaku Ram have worked satisfactorily, while Ahmed Hossein has been very irregular in his attendance and will probably have to be dismissed, though it is difficult to find men who are capable of being trained for the work.

### FIRST ASSISTANT TO THE SUPERINTENDENT.

Mr. R. L. Chapman officiated throughout the year in this appointment. During Mr. Cotes' absence on leave and deputation he also carried on the routine duties of the Entomological Section, where he appears to have done some useful economic work.

### SECOND ASSISTANT TO THE SUPERINTENDENT.

From Mr. O. L. Fraser's quarterly reports it appears that a large part of his time was taken up with the custody and distribution of stores.

The other work recorded by Mr. Fraser as completed by him is as follows :—

- (1) re-arrangement and partial re-labelling of the heads and horns in the Mammal Gallery;
- (2) registration and storing of birds' eggs and birds' skins;
- (3) destruction of condemned specimens of vertebrata;
- (4) arrangement of casts from Lucknow in the Archaeological Gallery;
- (5) safeguarding the reserve collections in the temporary godown known as the Tin shed.

## REPORT OF THE SUPERINTENDENT,

*The Naturalist to the Indian Marine Survey* worked in the Museum from the middle of May until the end of August, during which time he catalogued the *Investigator* Deep Sea Asteroidea and Deep Sea Fishes, etc., adding the following types to the Museum records:—

### PISCES.

*Lamprogrammus fragilis.*  
*Hepthocara* (nov. gen.) *simum.*  
*Chauliodus pammelas.*  
*Bathypterois insularum.*  
*Alepocephalus Blanfordii.*  
*Alepocephalus edentulus.*  
*Xenodermichthys Guentheri.*  
*Halosaurus parvipinnis.*

### ASTEROIDEA.

*Pararchaster Huddlestonii.*  
*Pararchaster violaceus.*  
*Pontaster cribellum.*  
*Pontaster pilosus.*  
*Persephonaster coelochiles.*  
*Dipsacaster* (nov. gen.) *Sladeni.*  
*Pentagonaster investigatoris.*  
*Pentagonaster pulvinus.*  
*Milteliphaster* (nov. gen.) *Wood-Masoni.*  
*Dorigona pentaphylla.*  
*Nymphaster florifer.*  
*Nymphaster Nora.*  
*Paragonaster tenuiradiis.*  
*Mediaster roseus.*

## INDIAN MUSEUM.

*Anthenoides sarissa.*  
*Palmipes pellucidus.*  
*Zoroaster Alfredi.*  
*Zoroaster barathri.*  
*Zoroaster planus.*  
*Zoroaster angulatus.*  
*Zoroaster carinatus.*  
*Zoroaster Gilesii.*  
*Zoroaster squameus.*  
*Zoroaster zea.*  
*Pedicellaster atratus.*  
*Brsinga Gunnii.*

## HYDROZOA.

*Stylactis minoi*—a Gymnoblastic Anthomedusoid, living as a commensal upon a Scorpænoid fish.

He also published the following papers :—

Natural History Notes from Her Majesty's Indian Marine Surveying Steamer *Investigator*, Lieutenant Gordon S. Gunn, R.N., Commanding :—

- (1) Ser. II, No. 5. On the Bathybial Fishes collected during the season 1891-92.
- (2) Ser. II, No. 6. A case of Commensalism between a Gymnoblastic Anthomedusoid (*Stylactis minoi*) and a Scorpænoid Fish (*Minous inermis*).
- (3) Nat. Hist. Notes, etc., Commander C. F. Oldham, R.N., Commanding.—Ser. II, No. 7. An account of the collection of Deep Sea Asteroidea.

DR. A. F. R. HERNLE has, as usual, on several occasions given his advice and assistance in matters numismatic. He has also very kindly revised the final proofs of the Coin Catalogue.



## REPORT OF THE SUPERINTENDENT,

Fulton, Mr. H.—Exchanged Shells in exchange for Shells.

Giglioli, Professor H. H.—Crustacea in exchange for *Investigator* Fishes, Asteroidea and Corals.

Oxford University Zoological Museum—*Investigator* Fishes and Corals.

Vienna Museum—*Investigator* Asteroidea and Corals.

### ADDITIONS.

Four thousand six hundred and thirty specimens have been labelled, registered and recorded in the list of additions during the past year. A summary of additions is appended, and the following short notes upon those of most interest is submitted.

### ZOOLOGICAL ADDITIONS.

Phylum—ECHINODERMA.

Class—ASTEROIDEA.

The additions comprise 56 species of Deep Sea Star-fishes, including the 26 types already named.

Phylum—APPENDICULATA.

Class—CRUSTACEA

1,322 specimens have been added to the collection. The greater number of these are deep-sea forms of great rarity and value. There must also be noticed the crabs and Squillidæ presented by Captain Wicks of Coconada, the crabs presented by Mr. Daly and Captain J. H. Row, and the land crabs from the Trevandrum Museum.

Phylum—MOLLUSCA.

53 exchanges from Mr. Fulton, which include some valuable bathybial forms from the Pacific Ocean.

## INDIAN MUSEUM.

Phylum—VERTEBRATA.

Class--MAMMALIA.

Among the additions special notice must be taken of the five black wolves' skins and the Yak head presented by Lt.-Colonel Fraser.

Class--AVES.

Mention must be made of the Birds of Paradise purchased from Mr. W. Doherty's collector, as a valuable and much needed addition to the collection.

Class--REPTILIA.

A nice collection of South Indian snakes has been received from the Trevandrum Museum.

Class—PISCES.

From the *Investigator* a fine collection of Deep Sea Fishes, including eight new types, has been received.

Captain J. H. Row and Captain Wicks, of Coconada, have also presented some rare and valuable specimens.

Special mention must be made of the types of Ganoid Fishes presented by Mr. S. J. Harmer, of the Cambridge University Zoological Museum, the collection having hitherto been destitute of specimens of this interesting and phylogenetically ancient order.

## ARCHOÆOLOGICAL ADDITIONS.

Mention must be made of the Fatehpur Sikri casts prepared in the Lucknow Museum and presented by the Govern-

## REPORT OF THE SUPERINTENDENT,

ment of India, and of the splendid Rivett-Carnac collection of coins purchased.

Coins also were presented by the Punjab Archæological Survey and by the Gwalior Durbar.

### LIBRARY.

One thousand three hundred and eighty-three volumes were added to the Library during the year, of which 714 were donations and 669 were purchased. The names of the donors are mentioned in Appendix B.

Among the donations must be mentioned the works of Mons. E. Selys-Longchamps on the class Insecta, consisting of 61 volumes and pamphlets presented by the author.

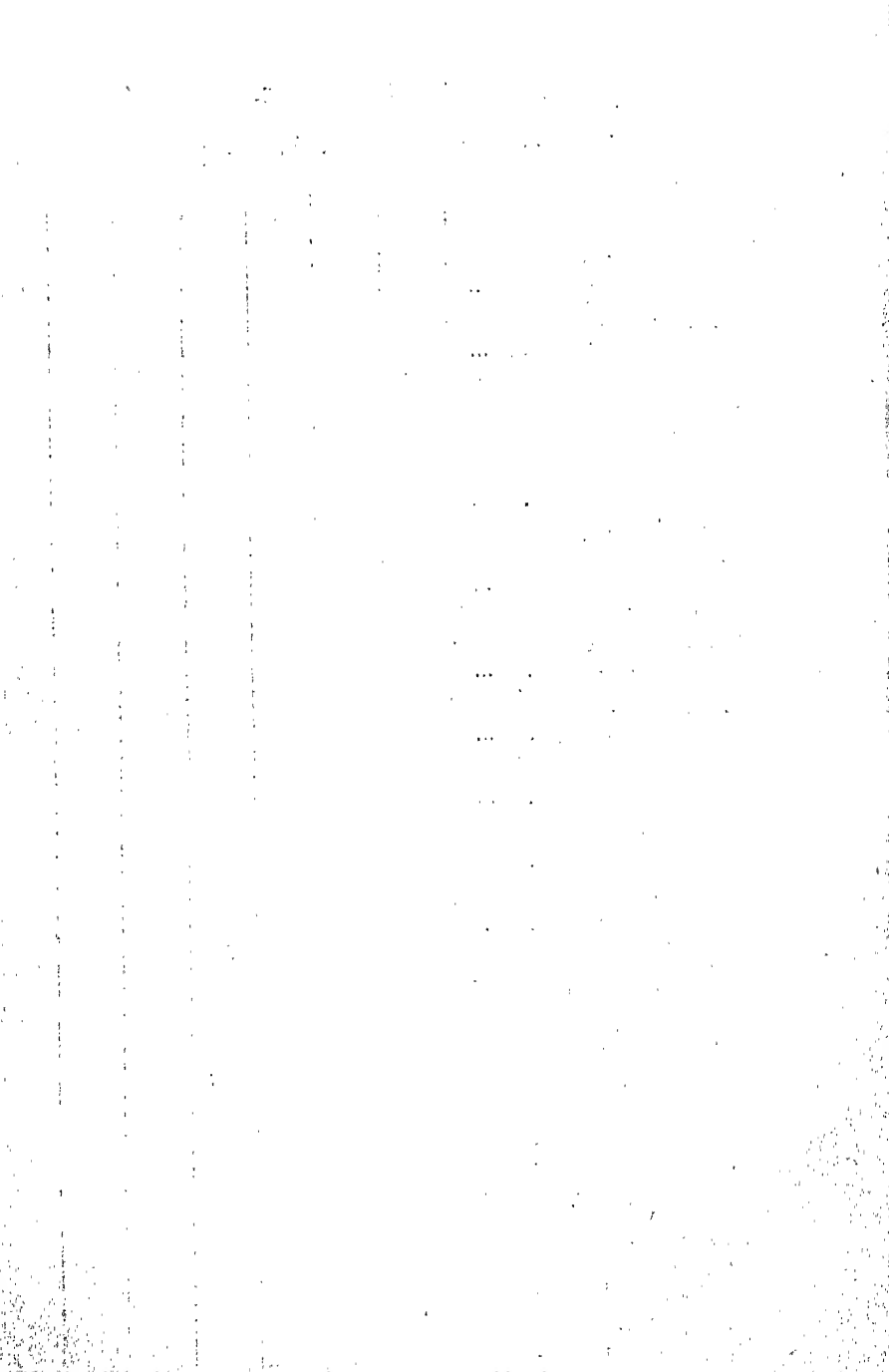
The books are all in good order.

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# INDIAN MUSEUM.

*Summary of Additions for the year 1892-93.*

<b>ZOOLOGY—</b>									
<b>PROTOZOA—</b>									
FORAMINIFERA—									
Donations . . .	...								
<b>BETICULARIA—</b>									
Donations . . .	...								
<b>CELENTERA—</b>									
MADREPORARIA—									
Donations . . .	1				1				
<b>PORIFERA—</b>									
Donations . . .	...						1		
<b>PLATYHELMIA—</b>									
HIRUDINEA—									
Donations . . .	...								
<b>ECHINODERMA—</b>									
HOLOTHURIOIDEA—									
Donations . . .	...								
<b>ECHINOIDEA—</b>									
Donations . . .	...								
<b>OPHIUROIDEA—</b>									
Donations . . .	...								
<b>ASTEROIDEA—</b>									
Donations . . .	233				233				
<b>CRINOIDEA—</b>									
Donations . . .	...						233		
<b>NEMATOIDEA—</b>									
Donations . . .	1						1		
<b>CHÆTOPODA—</b>									
Donations . . .	3						3		
<b>ARTHROPODA—</b>									
<b>CRUSTACEA—</b>									
Donations . . .	1,290								
Exchanges . . .	3								
Purchases . . .	3								
Museum Coll. . .	26				1,322				
<b>TRACHEATA—</b>									
<b>Arachnoidea—</b>									
Donations . . .	20			20					
<b>Myriopoda—</b>									
Donations . . .	3			3					
<b>Hexapoda—</b>									
<b>Orthoptera—</b>									
Donations . . .	19		19						
<b>Rhynchota—</b>									
Donations . . .	59		59						
<b>Neuroptera—</b>									
Donations . . .	80		80						
<b>Coleoptera—</b>									
Donations . . .	246								
Museum Coll. . .	15		261						
<b>Lepidoptera—</b>									
Donations . . .	660								
Museum Coll. . .	1								
Reared in Mus. . .	50		711						
<b>Hymenoptera—</b>									
Donations . . .	84								
Reared in Mus. . .	4		88						
<b>Diptera—</b>									
Donations . . .	...								
Reared in Mus. . .	2		2		1,220				
					1,243		2,565		
<b>PODAXONIA—</b>									
<b>POLYZOA—</b>									
Donations . . .	...								
<b>BRACHIOPODA—</b>									
Donations . . .	...								
<b>GEPHYREA—</b>									
Donations . . .	...								
<b>MOLLUSCA—</b>									
Donations . . .	...								
Exchanges . . .	53						53		
<b>CHORDATA—</b>									
<b>CEPHALOCHORDA—</b>									
Donations . . .	...								
<b>UROCHORDA—</b>									
Donations . . .	1				1				
<b>VERTEBRATA—</b>									
<b>Mammalia—</b>									
Donations . . .	27								
Exchanges . . .	...								
Purchases . . .	1								
Museum Coll. . .	11			39					
<b>Sauropsida—</b>									
<b>Aves (Skins)—</b>									
Donations . . .	270								
Exchanges . . .	...								
Purchases . . .	18								
Museum Coll. . .	7		295						
<b>Aves (Eggs)—</b>									
Donations . . .	205								
Purchases . . .	2		207						
<b>Reptilia—</b>									
Donations . . .	30		30		532				
<b>Ichthyopsida—</b>									
<b>Amphibia—</b>									
Donations . . .	...								
<b>Pisces—</b>									
Donations . . .	41								
Exchanges . . .	13		54		54		625		
							626		
							3,482		...
<b>ARCHÆOLOGY—</b>									
Prehistoric relics,									
Sculptures, Inscrptions,									
and Miscellaneous.									
Donations . . .	65						65		
<b>Coins—</b>									
Donations . . .	1,070								
Purchased . . .	13						1,083		
							1,148		...
<b>TOTAL SPECIMENS RECEIVED DURING THE YEAR . . . . .</b>									4,630
									13



## INDIAN MUSEUM.

### THE PUBLIC.

The Museum was closed according to the Bye-laws from 1st to 15th May and from 1st to 15th November for general cleaning and repairs.

During the 237 days on which the Institution was open to the general public, 429,230 persons were admitted—a daily average of 1,811 persons.

### THE COLLECTIONS,

So far as is known, are in good order. The reserve collections temporarily stored in the tin shed, though in a situation that must be regarded as precarious, are also, so far as is known, in good preservation.

A. ALCOCK,

*Offg. Superintendent of the Indian Museum.*

# REPORT OF THE SUPERINTENDENT,

## APPENDIX A.

### *List of Donors to the Indian Museum during the year 1892-93.*

Alcock, Dr. A.	Daly, Mr. W. M.
Anderson, Dr. G. E.	Davison, Mr. W.
"    Dr. J.	DeCruze, Mr. R. A.
" <i>Asian</i> ," Editor of the.	Dresden Zoological Museum.
Baker, Mr. E. C. S.	Economic and Art Section.
Barlow, Mr. E.	Elson, Mr. S. R.
Barnard, Mr. A. B.	Ferguson, Mr. H. S.
Barnes, Mr. H. E.	Folin, Mons. de.
Basin, Forest Officer of.	Forbes, Mr. H. O.
Behar, Sub-divisional Officer of.	Fornaro, Mr. H.
Bengal Gold and Silver Mining Co.,	Fraser, Lt.-Col. J.
Limited.	"    Mr. O. L.
Bingham, Major C. T.	Fulton, Mr. H. (by exchange).
Birch, Dr. E. A.	Gamble, Mr. J. S.
Blanford, Mr. W. T.	Gammie, Mr. J.
Blechynden, Mr. R.	Government of Bengal.
Boezalt, Mr. J. R.	"    "    Bombay.
Booley, Mr. G. H.	"    "    Punjab.
Cambridge University (by ex-	Green, Mr. E. E.
change.)	Gwalior, Durbar of.
Cape Town, South African Mu-	Hadfield, Mr. G.
seum.	" <i>Indian Daily News</i> ," Editor of
Cardew, Mr. A. G.	the.
Chitral Mission.	Irvine, Mr. W. H.
Christian, Mr. H. D.	Irving, Mr. W. H.
Cleghorn, Mr. J.	Jackson, Mr. W.
Cockburn, Mr. J.	Jamaica, Institute of.
Collett, General Sir H.	Jardine, Skinner & Co., Messrs.
Crawford, Mr.	Kabul, British Agent at.
Cumming, Mr. W. D.	Karachi Museum.

# INDIAN MUSEUM.

Keymer, Mr. H. E.	Queensland Museum.
Lahore, Director of Land Records and Agriculture.	Radde, Dr. A. G.
Lambert, Mr. J., C.I.E.	Roepstorff, the late Mr. F. A. de.
Lancaster, Mr. J.	Row, Capt. J. H.
Leathem, Maj. G. H.	Rogers, Mr. L.
Lewis, Mr. G.	Rutledge, Mr. W.
Madras Central Museum.	Schmaacker, Mr. B. (by exchange).
Marine Survey of India.	Schneider, Mr. T. H.
Meade, Mr. J. T.	Scully, Dr. J.
Michell, Col. J.	Selys-Longchamps, Baron E. de.
Middleton, Mr. F. H.	Shillong Museum.
Milner, Mr. A. J. B.	Simpson, Dr. J. W.
M'Intosh, Dr. (by exchange).	Stewart, Mr. E.
Monghyr District, Collector of.	St. John, the late Sir O. B.
Mukherji, Babu P. C.	Target, Mr. W.
"      "      S. B.	Thomas, Mr. J. W.
Munn, Mr. P.	Thorald, Dr. W. G.
Murray, Dr. R. D.	Thornhill, Capt. H. B., I. S. C.
Museum Collectors.	Trevandrum Museum.
Neville, Mr. G.	Turner, Mr. A. W.
Newnham, Captain A.	Weber, Mr. B.
Niceville, Mr. L. de.	Whiffn, Mr. B. Dundas.
Noble, Mr. B.	Wicks, Capt. G. W., R. N. R.
Paris Museum (by exchange).	Wood-Mason, Mr. & Mrs. J.
Parker, Mr. J. C.	Worsley, Capt. F.
Partridge, Mr. W. W.	Wroughton, Mr. R. C.
Prain, Dr. D.	Yarkand Expedition.
Punjab, Archæological Survey.	Yunan      "
	Zoological Gardens, Calcutta.



# REPORT OF THE SUPERINTENDENT,

## APPENDIX B.

### *List of Donors to the Library of the Indian Museum during 1892-93.*

Adcock, Mr. D. J.	1
Adelaide, Royal Society of South Australia	4
Agricultural and Horticultural Society of India	1
Alcock, Dr. A.	6
Asiatic Society of Bengal	14
Bombay Society of Natural History	5
Brisbane, Department of Agriculture	1
"    Queensland Museum	1
Brussels, Société Royale Malacologique	2
Buenos Aires National Museum	2
Cambridge (Mass.) Museum of Comparative Zoology at Harvard College	8
Cambridge University	1
Cameron, Mr. P.	2
Cape Town, South African Museum	4
Chili, Scientific Society	3
Cincinnati Museum Association	3
Colombo Museum	2
"    Royal Asiatic Society, Ceylon Branch	2
Connecticut, Bridgeport Scientific Society	1
Costa Rica, Museo Nacional	3
Dehra Dun, Forest School	12
Dresden, Zoological Museum	3
Dublin, Royal Irish Academy	8
Edinburgh, Science and Art Museum	1
Fleutiaux, Mons. E.	2
Forel, Mons. A.	3
Friedländer and Sohn, Messrs. R.	28
Government of Assam	6
"    "    Bengal, Printing Press	1
"    "    Bombay	9
"    "    Central Provinces	7
"    "    India, Comptroller of India Treasuries	1
"    "    "    Finance and Commerce	2
Carried forward	149

# INDIAN MUSEUM.

	Brought forward	149
Government of India, Foreign Department		4
" " " Geological Survey		7
" " " Home Department		27
" " " Meteorological Department		38
" " " Printing Press		18
" " " Revenue and Agricultural Department		22
" " " Sanitary Commissioner		3
" " " Survey Department		1
" " " Trigonometrical Survey		5
" " Madras		2
" " North-Western Provinces and Oudh		26
" " Perak		32
" " Punjab		1
" " United States of America		12
Haarlem, Koloniaal Museum		9
Halifax, Nova Scotia Institute of Natural Sciences		2
Hultzsch, Mr. E.		2
Hutton, Mr. H. W.		1
Indian Museum		28
Jamaica, Institute of		4
Janson, Mr. O. E.		1
Karachi, Collector of Customs		5
Kerremans, Mons. le Captain C.		2
Lahore Government Museum		1
Leipzig, Königlich-Sachs. Gesellschaft der Wissenschaften		11
Lewis, Mr. G.		1
Lintner, Mr. J. A.		3
London, British Museum		2
" " " (Natural History)		3
" " Royal College of Surgeons		17
" " Society		16
" " Zoological Society		7
Luoknow, Provincial Museum		4
Madras, Central Museum		2
Marine Survey of India		1
Meerut, Horse Breeding Department		2
Meyer, Dr. A. B.		1
Minnesota, Academy of Natural Sciences		1
Mitra, Babu S. C.		5
	Carried forward	478

# REPORT OF THE SUPERINTENDENT,

	Brought forward	478
Mysore Durbar		1
„ Government Museum		4
New York, American Museum of Natural History		2
Nonfried, Mons. A. F.		6
Oxford University		1
Padova, R. Stazione Bacologica Sperimentale		10
Philadelphia, Academy of Natural Sciences		2
Ragonot, Mons. E. L.		1
Rondot, Mons. N.		2
Saigon Museum		1
Saussure, Dr. H.		1
Selys-Longchamps, Baron E. de		61
Shufeldt, Mr. R. W.		1
Smithsonian Institution		51
Suchetet, Mons. Andre		1
Sydney, Agricultural Department of New South Wales		16
„ Australian Museum		9
„ Linnean Society of New South Wales		26
Thomas, Mr. O.		1
Torino, Musei de Zoologia ed Anatomia comparata della R. Universita		21
Vienna, K. K. Natur. Hof. Museum		4
Webster, Mr. F. M.		2
Wood-Mason, Mr. J.		12
	Donations	714
	Volumes purchased	669
	TOTAL	1,383

# INDIAN MUSEUM.

## APPENDIX C.

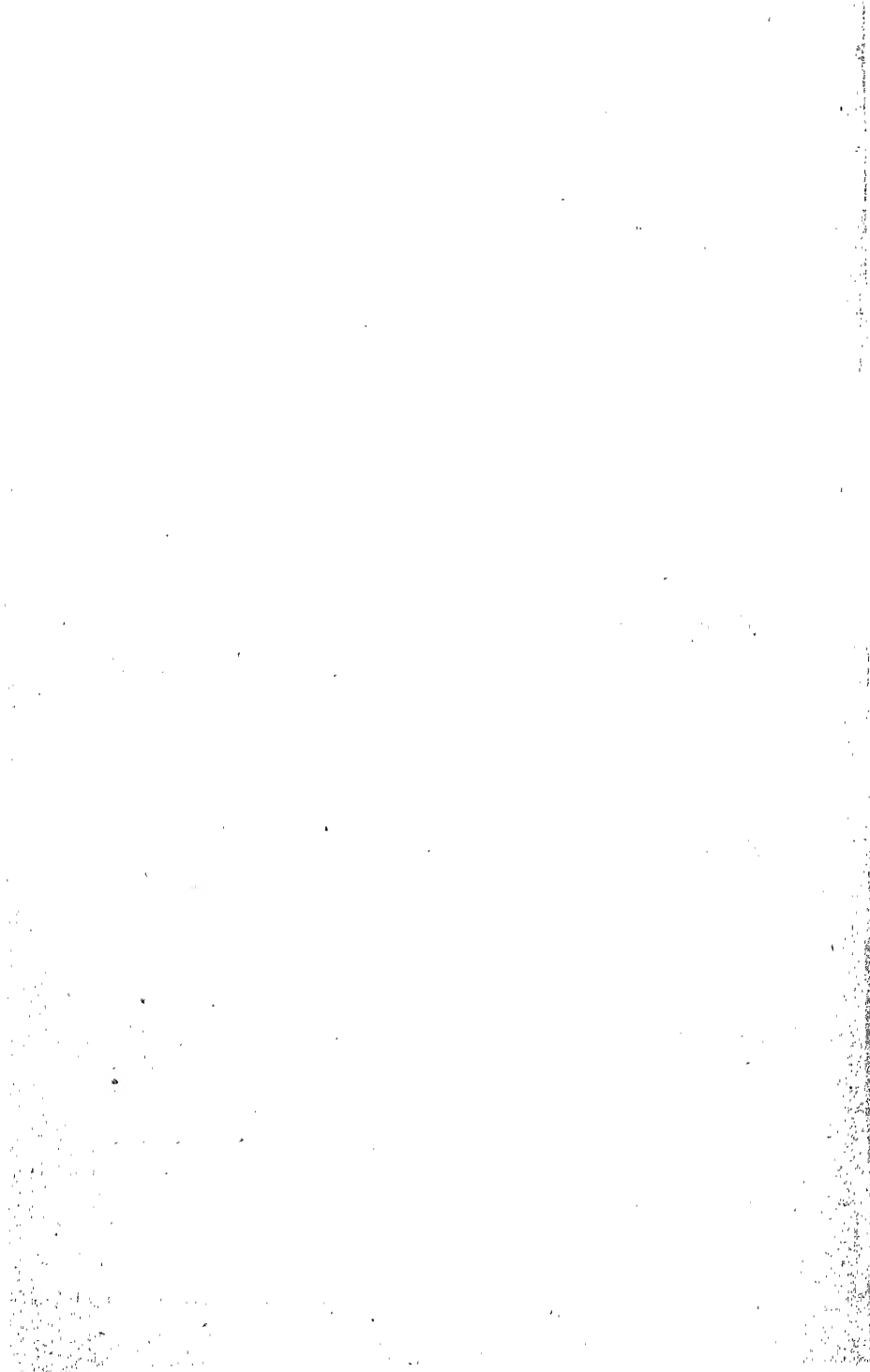
### YEARLY RETURN OF VISITORS.

*Number of Visitors from 1st April 1892 to 31st March 1893.*

MONTH.	NATIVES.		EUROPEANS.		TOTAL.
	Male.	Female.	Male.	Female.	
April 1892 .	28,406	7,746	400	120	36,672
May* „ .	15,970	4,626	305	120	21,021
June „ .	29,237	9,290	369	113	39,009
July „ .	27,049	7,724	386	113	35,272
August „ .	29,604	7,326	403	109	37,442
September „ .	26,207	7,932	528	201	34,868
October „ .	35,354	10,074	706	235	46,369
November* „ .	13,655	3,693	363	195	17,906
December „ .	31,225	7,971	1,060	626	40,882
January 1893 .	35,540	11,095	1,630	727	48,992
February „ .	25,410	7,773	859	292	34,334
March „ .	27,773	7,734	794	167	36,468
GRAND TOTAL .	325,430	92,984	7,803	3,018	429,235

The number of Visitors to the Museum during the 237 days on which the Institution was open to the general public was 429,230, or a daily average of 1,811 persons.

\* Closed on account of annual repairs from 1st to 15th May and 1st to 15th November.



# REPORT

OF

## THE OFFICER IN CHARGE, ECONOMIC AND ART SECTION

FOR THE YEAR 1892-93.

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### I.—CHARGE OF THE SECTION.

1. The arrangement by which I was placed in charge of this Section, in addition to fulfilling the duties of Reporter on Economic Products to the Government of India, remained in force, during the year.

2. During the year I was repeatedly absent from headquarters on duty in connection with the Imperial Institute, and, in my absence, the work of the Section was satisfactorily carried on, under my direction, by the Assistant Curator, Mr. T. N. Mukharji.

### II.—ARRANGEMENT OF COURTS.

3. The bulk of the work of the Section consisted in the arrangement of the Art and Ethnology Courts of the new building, and the collection and systematic investigation of certain selected economic products in connection with the Imperial Institute.

## REPORT OF THE OFFICER IN CHARGE,

4. The Art Court, which was arranged under the supervision of the Assistant Curator, on lines approved by myself, was opened to the public on September 1st, 1892; and the Ethnology Court, which was arranged throughout under my immediate supervision, was opened to the public on January 1st, 1893.

5. In the arrangement of the Art Court the following classification was adopted, exhibits of the same nature from each Province or centre of manufacture being kept together, so far as was possible with due consideration for the general effect of the Court:—

- I.—Painting on glass, ivory, leather, mica and paper.
- II.—Jewelry.
- III.—Metal-ware.
- IV.—Lacquer-ware.
- V.—Wood-carving.
- VI.—Stone-carving and lapidary's work.
- VII.—Ivory, horn, and shell-manufactures.
- VIII.—Leather-manufactures.
- IX.—Pottery.
- X.—Glass-manufactures.
- XI.—Basket-work.
- XII.—Mats.
- XIII.—Textile fabrics.
- XIV.—Clay models and figures.

6. Among the additions to the Art Court during the year the following may be mentioned:—

1. A collection of ivory work, brass vessels, cotton and silk fabrics, and lacquer-ware received from the extinct Shillong Museum.
2. A collection of silver jewelry worn by the peasantry of the Simla hills.
3. A collection of Pungal cotton fabrics.
4. Specimens of Tinnevely and Tanjore mats.

## ECONOMIC AND ART SECTION.

7. In the Ethnology Court the following system of arrangement was carried out:—

- I.—Andamanese.
- II.—Nicobarese.
- III.—Burmese, Karens, Manipuris, Lushais, Nagas, Singphos, Daphlas, Akas, Miris, Mikirs, Mishmis, Khasias, Garos, Bhutias, Lepchas and Nepalese.
- IV.—Santals, Mundas, Oraons, Kharrias, Bhuyas, Lohars, Panikas, Kols, Gonds, Bhils and Khonds.
- V.—Lumbádís, Rampas, Chenchus, Koragas, Kadirs, Todas, Chernmas and Nayadís.
- VI.—Semi-Hinduised tribes of Bengal.
- VII.—Aryans, including Uriyas, Rajputs, Jats, and Pathans.

8. While I was engaged in the arrangement of the Ethnology Court, a large number of photographs (Bromide and Platinotype prints) were acquired in Calcutta, Bombay and Madras, and some of the most conspicuous and easily rectified desiderata, especially in the Section devoted to the tribes of Southern India (Group V), were filled up, or arrangements made for their being filled up hereafter.

9. In its present state the Ethnology Court contains what may be termed an excellent nucleus collection, capable of and demanding very considerable expansion. This expansion of the Ethnological series and the arrangement of the Economic Court should, in fact, form the most important part of the initial duties of my successor in charge of the Section.

10. The Section was indebted to Mr. Cleghorn for a collection illustrating the personal ornaments, clothing, agricultural and fishing appliances, etc., of the Santals and Oraons; and to Mr. Portman for a series of excellent photographs and transparencies of the Andamanese.



## REPORT OF THE OFFICER IN CHARGE,

11. In the Economic Court some of the collections of "Commercial Products" (Cotton, Jute, Cocoanut, etc.) were provisionally arranged, but, owing to the pressure of work in connection with the opening of the Imperial Institute, no serious attempt was made to finally arrange it.

12. The following "Commercial Products" were selected for collection and systematic investigation during the year :—

Acacia gums.	India-rubber.
Albizzia Timber. (" <i>E. Indian</i> <i>walnut.</i> ")	Insect wax.
Barley.	Jalap.
Cutch.	Kaméla dye.
Garjan and In or Eng oils.	Kut (Coplate).
Ground-nut.	Soapstone.
	Sugar.
	Turpeth or Indian Jalap.

Of the collections of the above products which were received, as also of the collections which were made in the Calcutta bazar for the Index series of the Imperial Institute, a portion was set apart for future incorporation in the Museum Collection.

### III.—HAND-BOOKS.

13. My time was largely taken up throughout the year in the preparation of Hand-books of Commercial Products (Imperial Institute Series), of which the following had been issued, or were approaching completion, at the end of the year :—

- |     |                       |
|-----|-----------------------|
| No. | 1. Padauk timber.     |
| "   | 2. Ipecacuanha.       |
| "   | 3. Podophyllum Emodi. |
| "   | 4. Sida Fibre.        |
| "   | 5. Jute.              |

## ECONOMIC AND ART SECTION.

- No. 6. Al (morinda) dye and dyeing.
- „ 7. Resin and Turpentine from Indian Pines.
- „ 8. Iron, Southern Districts of Madras.
- „ 9. Indian coal.
- „ 10. Adhatoda Vasica.
- „ 11. Linseed.
- „ 12. Fibres for brush-making.
- „ 13. Cutch.
- „ 14. Kút.
- „ 15. Turpeth or Indian Jalap.
- „ 16. Kaméla dye.
- „ 17. Garjan and In or Eng oils.
- „ 18. Jalap.
- „ 19. Mica.
- „ 20. Castor oil.
- „ 21. Sesamum oil.
- „ 22. Silk.
- „ 23. Ground-nut.
- „ 24. Barley.

To Dr. W. King I am indebted for much assistance and advice in the preparation of the Hand-book dealing with Indian coal. The Hand-book on Mica was prepared in consultation with Mr. T. H. Holland, and that on Silk by Mr. E. C. Cotes.

### IV.—CONDITION OF THE COLLECTIONS.

14. The exhibits in the different Courts are on the whole in good condition. In the Art Court carpets and woollen manufactures are comparatively free from insects in the new building. Many of the old specimens of products in the Economic Court have considerably deteriorated, and they are gradually being replaced by duplicates of specimens obtained in connection with the Imperial Institute collections.

**REPORT OF THE OFFICER IN CHARGE, ECONOMIC, ETC.**

In the Ethnology Court some trouble has been caused by boring insects, and the collections will have to be very carefully watched, and specimens poisoned directly they are attacked.

**EDGAR THURSTON,**

*Officer in Charge.*



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